

## CLAIMS

What is claimed is:

- 1 1. A method comprising:
- 2 receiving a data packet through a wireless channel;
- 3 evaluating quality of said wireless channel;
- 4 calculating a packet error ratio (PER) value for said data packet;
- 5 checking whether said PER value is within an acceptable level; and
- 6 determining whether an intermittent noise is affecting said PER value.
- 1 2. The method of claim 1 further comprising determining whether said intermittent
- 2 noise is due to a frequency hopping spread spectrum (FHSS) wireless device.
- 1 3. The method of claim 2 wherein said data packet is wirelessly transmitted from a
- 2 first wireless device to a second wireless device at a bit rate, said first and second
- 3 wireless devices both compatible to a common wireless protocol.
- 1 4. The method of claim 3 further comprising stepping up said bit rate at which said
- 2 data packet is transmitted if said PER value is less than a raise rate threshold.
- 1 5. The method of claim 4 further comprising stepping down said bit rate at which
- 2 said data packet is transmitted if said PER value is greater than a drop rate threshold.
- 1 6. The method of claim 5 further comprising stepping down said bit rate if said

2 intermittent noise is caused by a non-FHSS or constant interference source.

1 7. The method of claim 6 further comprising propagating against said data rate to  
2 said second wireless device.

1 8. The method of claim 7 wherein said FHSS wireless device is a Bluetooth device.

1 9. The method of claim 8 wherein said data packet is received at an 802.11(b)  
2 device.

1 10. A method comprising:  
2 evaluating a data packet for any error;  
3 checking whether said data packet includes a packet error;  
4 calculating a packet error ratio (PER) for said data packet; and  
5 raising data rate setting at which subsequent data packet are transmitted if no  
6 packet error exists and said PER is less than a raise rate threshold.

1 11. The method of claim 10 further comprising backing off said data rate if an error  
2 exists and said PER value is greater than a drop rate threshold.

1 12. The method of claim 11 further comprising stepping down said data rate if an  
2 intermittent noise from a non-FHSS or constant interference source causes a packet error.

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1 13. The method of claim 11 further comprising:  
2 generating a signal strength value and saving said value in a memory location;  
3 and  
4 evaluating a value for said data packet, wherein said data rate is increased if an  
5 average signal strength value based on prior data packets is above a signal strength  
6 raise rate threshold.

1 14. The method of claim 13 comprising determining whether said packet error is due  
2 to intermittent interference.

1 15. The method of claim 14 wherein said intermittent interference is caused from a  
2 frequency hopping spread spectrum (FHSS) device.

1 16. The method of claim 15 further comprising stepping down said data rate if said  
2 interference is not caused by said FHSS device.

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1 17. An apparatus comprising:  
2 a wireless transceiver to send and receive a data packet via wireless  
3 communications;  
4 a network interface card coupled to said wireless transceiver, said network  
5 interface card to connect to another wireless device to form a wireless local area  
6 network; and  
7 firmware comprising control logic to calculate a packet error ratio (PER) value for

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8 said data packet, check whether said PER value is within an acceptable level,  
9 determine whether an intermittent noise is affecting said PER value, step up data  
10 transfer rate at which said data packet is transmitted if said PER value is less than a  
11 raise rate threshold and said intermittent noise is due to a frequency hopping spread  
12 spectrum (FHSS) device.

1 18. The apparatus of claim 17 wherein said control logic is to further determine  
2 whether said intermittent noise is due to said FHSS wireless device.

1 19. The apparatus of claim 18 wherein said FHSS wireless device is a Bluetooth  
2 device.

1 20. The apparatus of claim 19 wherein said apparatus is a 802.11(b) protocol  
2 compatible wireless device.

1 21. The apparatus of claim 20 wherein said control logic is to further step down said  
2 bit rate at which said data packet is transmitted if said PER value is greater than a drop  
3 rate threshold.

1 22. The apparatus of claim 21 wherein said control logic is to further step down said  
2 bit rate if said intermittent noise is caused by a non-FHSS source.

1 23. A machine readable medium having embodied thereon a computer program, said

2 computer program being executable by a machine to perform a method comprising:  
3 calculating a packet error ratio (PER) value for said data packet;  
4 checking whether said PER value is within an acceptable level;  
5 determining whether an intermittent noise is affecting said PER value;  
6 determining whether said intermittent noise is due to a frequency hopping spread  
7 spectrum (FHSS) wireless device; and  
8 stepping up a bit rate at which said data packet is transmitted if said PER value is  
9 less than a raise rate threshold.

1 24. The machine readable medium of claim 23 further comprising stepping down said  
2 bit rate at which said data packet is transmitted if said PER value is greater than a drop  
3 rate threshold.

1 25. The machine readable medium of claim 24 further comprising stepping down said  
2 bit rate if said intermittent noise is caused by a non-FHSS source.

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